

CLAIMS

1. A method of control signaling in a wireless communication system comprising the steps of

transmitting in at least a first part of a frame downlink control signals specifying at least one of the following:

transport format,
transport block size, and
new/continue data indication; and

transmitting in at least a second part of the same frame following said first part specifying a change in signal level for a pilot signal.

2. The method of claim 1 further comprising the step of transmitting in the same frame a HARQ channel ID.

3. The method of claim 1 further comprising the step of transmitting in the same frame a specification of redundancy version.

4. The method of claim 1 further comprising the step of transmitting in the same frame a specification of transmission time interval.

5. The method of claim 1 further comprising the step of transmitting in the same frame a MAC ID.

6. The method of claim 1 wherein control signals specifying each of the transport format, transport block size, and new/continue data indication are transmitted in at least a first part of the frame.

7. A method of control signaling in a wireless communication system comprising the steps of

receiving at user equipment in at least a first part of a frame downlink control signals specifying at least one of the following:

transport format,

transport block size, and
new/continue data indication; and
receiving at the user equipment in a second part of the same frame following said first part downlink control signals specifying a change in signal level for a pilot signal.

8. The method of claim 7 further comprising the step of receiving in the same frame a HARQ channel ID.
9. The method of claim 7 further comprising the step of receiving in the same frame a specification of redundancy version.
10. The method of claim 7 further comprising the step of receiving in the same frame a specification of transmission time interval.
11. The method of claim 7 further comprising the step of receiving in the same frame a MAC ID.
12. The method of claim 7 wherein control signals specifying each of the transport format, transport block size and new/continue data indication are transmitted in at least a first part of the frame.
13. A communication frame for use in a wireless communication system comprising:
a HARQ channel ID,
specification of a redundancy version,
specification of a transport format number,
specification of a transport block size,
a new/continue indicator, and
specification of a change in signal level for a pilot signal.
14. The communication frame of claim 13 further comprising a MAC ID.
15. The communication frame of claim 13 wherein the specification of a change in signal level for a pilot signal is located at or near the end of the frame.

16. The communication frame of claim 13 wherein the specification of a transport format number, the specification of a transport block size, and the new/continue indicator are located near the front of the frame.

17. The communication frame of claim 13 wherein the number of bits used to specify the following elements of the frame is:

transport format	3 bits
transport block size	3 bits
new/continue data indicator	1 bits
change in signal level	6 bits

18. The communication frame of claim 13 wherein the number of bits used to specify the HARQ channel ID is 3 bits and the number of bits used to specify the redundancy version is 3 bits.

19. The communication frame of claim 13 further comprising a specification of a variable or a fixed transmission time interval.

20. The communication frame of claim 13 wherein bits representing a MAC ID are exclusive ORed with bits representing other information carried in the frame.